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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,391	11/17/2003	Randolph B. Cohen	HAE-001.01	4392
25181	7590	12/23/2008		
FOLEY HOAG, LLP PATENT GROUP, WORLD TRADE CENTER WEST 155 SEAPORT BLVD BOSTON, MA 02110			EXAMINER BORLINGHAUS, JASON M	
			ART UNIT 3693	PAPER NUMBER
			MAIL DATE 12/23/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/716,391

**Applicant(s)**

COHEN ET AL.

**Examiner**

JASON M. BORLINGHAUS

**Art Unit**

3693

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

Applicant's election without traverse of Claims 1 – 11, 12 – 20 and 21 – 24 via telephone on 9/25/08 is acknowledged.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 1 – 11 and 12 - 20** are rejected under 35 U.S.C. 101 because, in order to comply with §101 a process must (1) be tied to another statutory class of invention (such as a particular apparatus or system for performance of the claimed process) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing.

The method, recited in Claims 1 – 11 and 12 - 20, fail to (1) be tied to another statutory class of invention or (2) transform underlying subject matter to a different state or thing. *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972). There is no recitation within the claims to indicate that the steps that comprise the method are nothing but mental steps performed within the mind of a person.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1 –11, 12 – 20 and 21 - 24** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claim 1** alternates between the following terminology - "a first portfolio", "one or more baseline portfolios", "the portfolio" and "the portfolios". Claim 1 makes it unclear whether "the portfolios" and "the portfolio" refer to "one or more baseline portfolios", "a first portfolio" or both in combination.

Examiner assumes that "the portfolios" and "the portfolio" refer solely to the "one or more baseline portfolios."

Claim 1 claims "the performance parameter". Claim 1 makes it unclear whether "the performance parameter" refers to the previously mentioned "a financial return measure" or another previous unstated parameter.

**Claims 2 – 24** suffer from similar problems.

Please review all pending claims and make corrections where necessary.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1 – 4, 6 – 15 and 17 - 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dembo (US Patent 5,799,287) in view of Fabozzi (Fabozzi, Frank J & Markowitz, Harry M. *The Theory & Practice of Investment Management*. John Wiley & Sons. 2001. pp. 6 – 8, 20 – 21, 42, 81, 164 - 166, 169, 172 – 174 and 808).

**Regarding Claim 1**, Dembo discloses a method for computing a performance parameter (replicating portfolio return) of a first portfolio (replicating portfolio) including one or more securities:

- providing one or more baseline portfolios (target portfolio) each including one or more securities. (see abstract; col. 2, lines 44 – 48);
- for each of the portfolios (target portfolio), computing a financial return measure based on financial returns of the portfolio (target return). (see abstract; col. 4, lines 38 – 42); and
- computing a quality measure (regret function/degree of similarity) based on the financial return (target return) for the portfolios (target portfolios). (see col. 9, lines 38 - 59);

- computing the performance parameter (replicating portfolio return) for the first portfolio (replicating portfolio). (see abstract; col. 4, lines 38 - 42); and

Dembo does not teach a method comprising for each different security included in one or more portfolios, compute a quality measure based on the relative weights of the security in the portfolios and the financial return measures for the portfolios, and compute the performance parameter for the first portfolio based on the one or more quality measures and the relative weights of the one or more securities included in the first portfolio. (emphasis added).

However, the concept of a weighted average in which each component element of a composite whole is assigned a weight and that calculations, concerning the composite whole, is based upon the weighted contributions of its component elements is very old and well known.

Fabozzi discloses a method comprising:

- for each different security (asset) included in one or more portfolios, compute a quality measure (rate of return of the asset) based on the relative weights of the security (asset) in the portfolios and the financial return measures for the portfolio (rate of return on the portfolio). (see pp. 20 - 21); and
- compute the performance parameter for the first portfolio (rate of return on the portfolio) based on the one or more quality measures (rate of return on assets) and the relative weights of the one or more securities (assets) included in the first portfolio. (see pp. 20 - 21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dembo by incorporating the ability to analyze parameters based upon security weight, as disclosed by Fabozzi, thereby allowing for portfolio assessment on a micro security-by-security scale.

**Regarding Claims 2 - 3**, Dembo does not teach a method wherein computing the financial return measure for the portfolio includes regressing financial returns for the portfolio in excess of a risk-free rate on a benchmark associated with an asset pricing model; nor wherein the financial return measure includes one of a Jensen's alpha, a Capital Asset Pricing Model alpha, a Fama-French alpha, and a four-factor alpha.

Fabozzi discloses a method wherein:

- computing the financial return measure for the portfolio includes regressing financial returns for the portfolio in excess of a risk-free rate on a benchmark (market index) associated with an asset pricing model (Jensen measure). (see p. 81); and
- wherein the financial return measure includes one of a Jensen's alpha. (see p. 81).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dembo and Fabozzi by incorporating an asset pricing model, as disclosed by Fabozzi, to determine whether the portfolio outperformed a market index.

**Regarding Claim 4**, Dembo discloses a method computing the quality measure (regret function/degree of similarity) for a security based on, for each portfolio that

includes the security, the product of the financial return measure for the portfolio (baseline portfolio) and the relative weight of the security in the portfolio (baseline portfolio). (see abstract; col. 2, lines 44 - 48; col. 4, lines 38 - 42; col. 9, lines 38 - 59).

**Regarding Claims 6 - 7**, Dembo discloses a method:

- wherein computing the performance parameter (replicating portfolio return) for the first portfolio (replicated portfolio) based on, for each security included in the first portfolio, the product of the quality measure (regret function/degree of similarity) and the relative weight of the security in the portfolio (baseline portfolio). (see abstract; col. 2, lines 44 - 48; col. 4, lines 38 - 42; col. 9, lines 38 - 59); and
- wherein the performance parameter (replicating portfolio return) for the first portfolio (replicating portfolio) includes computing the performance parameter based on a sum of the one or more products. (see abstract; col. 4, lines 38 - 42).

**Regarding Claims 8 - 9**, Dembo discloses a method wherein the securities include one or more of a bond, a futures contract and an option contract. (see col. 2, lines 11 - 32).

Dembo does not teach a method wherein the securities include one or more of a currency, a commodity and a stock; nor wherein the portfolios are mutual funds.

Fabozzi discloses a method wherein the securities include one or more of a currency, a commodity and a stock. (see p. 808); and wherein the portfolios are mutual funds. (see pp. 6 - 8).



It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Dembo and Fabozzi to incorporate securities and portfolios, as disclosed by Fabozzi, as such securities and portfolios are standard and conventional in investment management.

**Regarding Claims 10 – 11**, Dembo discloses a method wherein computing the performance parameter (replicating portfolio return) for the first portfolio (replicating portfolio) (see abstract; col. 4, lines 38 - 42):

- for each one or more baseline portfolios (target portfolios), computing a performance parameter. (see abstract; col. 4, lines 38 – 42); and
- for each portfolio (target portfolio), using the computed performance parameter as the financial return measure. (see abstract; col. 4, lines 38 - 32).

Dembo does not teach a method wherein the performance parameter is iteratively computed nor re-computed.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have repeated the method, since it has been held that mere duplication of the essential working parts of a device, without more, involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co*, 193 USPQ 8 (CA 7); *In re Harza*, 124 USPQ 378 (CCPA 1960).

**Regarding Claims 12 – 15 and 17 – 24**, such claims recite substantially similar limitations as claimed in previously rejected claims. Such claim limitations are therefore rejected using the same art and rationale as previously utilized. Applicant is reminded

that any argument contrary to such an interpretation is an indication of patentably distinct subject matter that may warrant a restriction requirement.

**Claims 5 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dembo and Fabozzi, as applied to Claims 4 and 15 above, and further in view of **Official Notice.**

**Regarding Claim 5**, Dembo discloses a method:

- wherein the quality measure (regret function/degree of similarity) for the security based on a sum of the one or more products. (col. 9, lines 38 - 59); and
- wherein the product is based on a sum of the relative weights of the security in each of the portfolios. (col. 9, lines 38 - 59).

Dembo does not teach a method wherein the product is normalized.

Examiner takes **Official Notice** that normalization of data, in order to reduce the effect of errors or variance within the data, is old and well known in the arts of statistical analysis and mathematics. It would have been obvious to one of ordinary skill in the art to have modified Dembo and Fabozzi by incorporating the normalization of data, as is old and well known in the art, allowing for more precise calculations.

**Regarding Claim 16**, such claim recites substantially similar limitations as claimed in previously rejected claims. Such claim limitations are therefore rejected using the same art and rationale as previously utilized.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON M. BORLINGHAUS whose telephone number is (571)272-6924. The examiner can normally be reached on Monday - Friday; 9am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James A. Kramer can be reached on (571)272-6783. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason M Borlinghaus/  
Examiner, Art Unit 3693

November 21, 2008